

REMARKS

Claims 1-6, 18-23, 35-40, 52-57 and 70-109 are pending in the present application. In the above amendments, claims 1, 4-6, 18, 21-23, 35, 38-40, 52-57 and 70 have been amended, claims 7-17, 24-34, 41-51 and 58-69 have been canceled, and new claims 71-109 have been added. Therefore, after entry of the above amendments, claims 1-6, 18-23, 35-40, 52-57 and 70-109 will be pending in this application. The new independent claims added at least some of the same features as previously claimed. The support for the new dependent claims are found in at least paragraphs [0060] - [0065] in the Applicants' specification. No new matter has been added.

35 U.S.C. 103(a) Rejection

Claims 1,3,7,9,13,14,18,20,24,26,30,31,35,37,41,43,47,48,52,53,58,60,64 and 65 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Dailey (U.S. Patent No. 6,419,491) in view of Hamalainen (U.S. Patent No. 5,966,378). Applicants respectfully traverse the rejection.

Applicants' claims are generally directed for avoiding a race condition between the service origination process and paging in a mobile operating in a group communication network. There simply is no discussion in the cited art of avoiding simultaneous service origination and paging in a mobile operating in a group communication network ... receiving a floor-control request from a source communication device for initiating a group call; initiating a service origination process from the source communication device; transmitting a response to the floor-control request and avoiding a race condition between the service origination process and paging by either configuring a communications manager to not respond immediately to the floor-control request or coordinating operation of a packet data serving node which receives a communications manager initiated response and a mobile switching center which responds to a

talker's service origination request and not issuing a service origination request until after a talker mobile station has received a response to the floor-control request. As discussed below, neither Dailey nor Hamalainen, individually or in combination, disclose, teach or suggest these features.

Dailey discloses conducting group calls in a wireless communication systems, specifically in conjunction with IS-136. Abstract, Fig. 6, Col. 7, lines 43-60, Col. 8, lines 52-60. A group call origination message is transmitted from an originating terminal, which is received at a system which then transmits a traffic channel designation message addressed to terminals in the group. Col. 8, line 38-52. Dailey in particular discusses a user initiating a group call to a *predefined group* [emphasis added] using a group call origination message. Col. 3, lines 52-58. It is important for Dailey to include a predefined group since the aspect of the disclosure that deals with the feature of receiving a floor-control request from a source communication device for initiating a group call and initiating a service origination process from the source communication device must include information in Dailey's disclosure to provide address information of the other group members, due to the limited nature of IS-136 signalling. "As illustrated in FIG. 10, call origination and traffic channel designation messages 1010, 1020 can be compressed into a single slot by using compressed addresses. IS-136 defines multiple address types, including the 34-bit Mobile Identification Number (MIN) that necessitates that use of 2-slot messages. A preferable choice for group call addressing is the Temporary Mobile System Identification (TMSI), ... however ... according to the embodiment illustrated in FIG. 10, the least significant 14 bits of the TSMI is used to address call origination and traffic channel designation messages 1010, 1020." This clearly indicates that the teaching is directed at predefined groups to be able to provide addressing information for both the originator and the group recipients in one slot of the IS-136 standard. The Applicants' claims do not state, nor desire, this

type of limitation. For this reason alone, Dailey should not read on the Applicants' features of **(ad-hoc for any group)** receiving a floor-control request from a source communication device for initiating a group call and initiating a service origination process from the source communication device.

Regarding independent claim 70 and the other related independent claims (83, 92 and 101), the Applicants' features of "coordinating operation of a packet data serving node which receives a communications manager initiated response and a mobile switching center which responds to a talker's service origination request; and not issuing a service origination request until after a talker mobile station has received a response to the floor-control request" is also not disclosed in Dailey. This feature indicates that both coordinating and not issuing must be done together, and is unique for that reason to avoid the problem the claims are directed at. For instance, the Examiner is directed towards page 7, paragraph [0077] and [0079] of the Applicants' specification which discloses:

In one embodiment, as discussed above in connection with FIG. 3, a talker mobile station (MS) may send a floor-control request 302 to the CM ... followed immediately with a service origination request 304 to the wireless, e.g., CDMA, infrastructure for quickly re-establishing its traffic channels. However, if the dormancy response timer is set to a small value, the CM may respond to the floor-control request 310 quickly and transmit a response 312 back to the talker MS. If this response arrives at the infrastructure during the early phases of the service origination transaction 304, the infrastructure notes that the talker MS does not have any active traffic channel and attempts to page the response to the talker MS. However, **this paging action may abort the service origination transaction already in progress.** [Emphasis added] ... In a second embodiment, the PDSN, which receives the CM-initiated response 312, and the mobile switching center (MSC), which responds to the talker's service origination request, **are coordinated.** [Emphasis added] That is, if the PDSN determines that a packet-data service origination process for the talker MS is already in progress when the CM-initiated response 312 arrives at the infrastructure, the MSC may defer paging the talker MS. The PDSN may cache the response and send it over the talker mobile's forward traffic channel once the service origination process is

complete. Alternatively, the MSC may send the response to the talker MS as an SDB message if the service origination process is still in progress.

Dailey does not disclose “coordinating operation of a packet data serving node which receives a communications manager initiated response and a mobile switching center which responds to a talker’s service origination request” and the previous office action does not indicate that it does.

Even ignoring the fact that both of these elements must be present, the Applicants’ feature of “not issuing a service origination request until after a talker mobile station has received a response to the floor-control request,” is also not disclosed in Dailey. While Dailey does in fact discuss “sending confirm message identifying originating message” in block 810 of Fig. 8, it does so only after the entire block of 805 (initiate new group call) which is illustrated in Fig. 7. Col. 9, 36-49. The discussion of Fig. 7 clearly indicates that a traffic channel designation message is transmitted after a group call origination message is received. Col. 8, lines 38-51. Therefore, the “system” actually sends out a traffic channel designation message (block 715) long before the confirm message (block 810) is sent out. This clearly runs counter to the Applicants’ features.

Finally, Dailey also states that “Because a group call is broadcast in several cells simultaneously on a common channel, there is no requirement that the system page the terminals of the group. This can reduce the overhead involved in setting up a group call, as a group call can be setup by simply receiving a predetermined type of call origination message from a terminal of a group, and responsively transmitting a group call traffic channel designation message to the other terminals of the group.” Col. 9, lines 12-19. This implies that not only does Dailey not disclose the Applicants’ features of avoiding a race condition between the

service origination process and paging, it actually teaches against it since it discloses that paging would not be necessary in setting up a group call.

Hamalainen not only fails to make up for the deficiencies of the primary reference, but also fails to disclose avoiding a race condition between the service origination process and paging. Hamalainen discloses avoiding collisions in radio communication between transmissions in the uplink and in the downlink by transmitting in different time slots. Abstract.

There would be no suggestion or motivation for the combination of Dailey with Hamalainen, since Dailey clearly taught away from the features of avoiding a race condition between the service origination process and paging, as stated above.

Additionally, Hamalainen generally discusses a problem where

the uplink and downlink transmissions of which are independent of each other, are collisions, meaning that the uplink and downlink transmissions overlap. In systems utilizing independent uplink and downlink transmissions the base station does not know which mobile station is transmitting in the uplink simultaneously when the base station should transmit a packet in the downlink. This kind of a situation is presented in FIG. 1 in which downlink and uplink transmissions are independent of each other and in the figure in the center TDMA frame the uplink and downlink have simultaneous communication to and from the same mobile station, resulting in a collision and at least one of the transmissions is lost. For example, in the above described packet radio system which utilizes uplink and downlink transmissions independent of each other, the packets are formed at moments almost impossible to predict. Col. 2, lines 33-48.

In other words, Hamalainen discusses a situation where transmissions are independent from each other and are impossible to predict when they will occur. This is what Hamalainen refers to when using the term collision, i.e., transmissions that are independent from each other and impossible to predict when they will occur. The term race condition is defined completely different in the Applicants' claims. A race condition in Applicants' claims is related to the

timing of different expected signals that are dependent upon a common expected process (i.e., a user requesting the floor for a push-to-talk communication session). Therefore, neither Dailey nor Hamalainen suggest or teach all the elements of the independent claims.

Dependent Claims

Claims 2-6, 19-23, 36-40, 53-57, 71-82, 84-91, 93-100 and 102-109 depend directly or ultimately from, and include all the subject matter of, claims 1, 18, 35, 52, 70, 83, 92 and 101, and should be allowed for at least the same reasons presented above regarding the independent claims as well as the additionally recited features found in the claims. Because independent claims 1, 18, 35, 52, 70, 83, 92 and 101 are believed to be allowable, Applicants have not argued or otherwise relied on independent patentability of dependent claims, but reserves the right to do so in this or any subsequent proceeding.

CONCLUSION

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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